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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/807,128

03/24/2004

Wen-Jian Lin

QCO.086A/061118

3668

59747

7590

07/14/2008

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EXAMINER

CALEY, MICHAEL H

ART UNIT

PAPER NUMBER

2871

MAIL DATE

DELIVERY MODE

07/14/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/807,128	<b>Applicant(s)</b> LIN, WEN-JIAN	
	<b>Examiner</b> MICHAEL H. CALEY	<b>Art Unit</b> 2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 27 March 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 15-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 15-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                         | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)              | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>5/12/04; 9/5/06; 3/16/07; 5/30/07; 7/31/07; 10/16/07; 1/24/08; 6/27/08</u> | 6) <input type="checkbox"/> Other: _____                          |



## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Claims 1, 2, 4, 5, 7, 8, 15, 16, 18, 20, 21, and 23-25 are rejected under 35**

**U.S.C. 102(b) as being anticipated by Stern (U.S. Patent No. 5,771,321).**

Regarding claims 1 and 24, Stern discloses a method for manufacturing a display panel comprising:

providing a substrate (12) having a micro electro mechanical structure, wherein the structure comprises:

a first electrode (56, 216) on the substrate;

a sacrificial layer (Figure 17 element 228) on the first electrode;

a second electrode (58) on the sacrificial layer (Column 38 line 44 – Column 40 line 62);

a plurality of supports (48) located between the first electrode and the second electrode;

adhering the substrate to a protection structure (38) with a first adhesive to form a cavity for enclosing the micro electro mechanical structure, wherein a sidewall of the cavity has at least one opening (Column 43 lines 17-39); and

removing the sacrificial layer by a release etching process with an etching reagent through the opening to form an optical interference reflection structure (Column 42 lines 4-26).

Regarding claim 2, Stern discloses the material of the first adhesive as comprising spacers and the spacers as keeping a predetermined distance between the protection structure and the substrate to prevent the protection structure from damaging the optical interference reflection structure (48).

Regarding claims 4, 5, and 25, Stern discloses closing the opening with a second adhesive after finishing the release etching process (Column 43 lines 17-39).

Regarding claim 7, Stern discloses the protection structure as a flat protection structure or a U-shaped protection structure (38).

Regarding claim 8, Stern discloses the protection structure as a U-shaped protection structure, and the opening as positioned on a sidewall of the U-shaped protection structure (38, 40).

Regarding claim 15, Stern discloses the sacrificial layer as comprising silicon (Column 38 line 32).

Regarding claim 16, Stern discloses adhering the substrate as comprising pressing the substrate to the protection structure (Figure 4).

Regarding claim 18, Stern discloses the opening as located in the first adhesive (Column 43 lines 17-39).

Regarding claim 20, Stern discloses a plurality of pixels (Column 20 lines 8-10).

Regarding claim 21, Stern discloses the protection structure as comprising at least one of the proposed materials (Column 3 lines 10-15).

Regarding claim 23, Stern discloses purging the etching agent prior to closing the opening (Column 40 lines 58-68, Column 43 lines 17-39).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 3, 6, and 17 rejected under 35 U.S.C. 103(a) as being unpatentable over Stern in view of Olster et al. (U.S. Patent No. 6,426,124 “Olster”).**

Stern fails to disclose the first or second adhesive as comprising a thermosetting adhesive. Olster, however, teaches a thermosetting adhesive as a functional equivalent of a caulk adhesive (Column 4 lines 37-40).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a thermosetting adhesive as the adhesive in the display device disclosed by Stern. One would have been motivated to use a thermosetting adhesive such that the adhesive may be cured according to known methods in the optical arts, such as taught by Olster (Column 4 lines 37-40).

**Claims 19, 22, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stern in view of Stafford et al. (U.S. Patent No. 6,778,046 “Stafford”).**

Stern fails to disclose the openings as uniformly distributed in the first adhesive. Stafford, however, teaches a uniform distribution of such openings (Figure 1 elements 20A, 20B; abstract).

It would have been obvious to one of ordinary skill in the art at the time the invention to form a plurality of uniformly distributed openings. One would have been motivated to form multiple distributed openings as proposed to allow for even application and evacuation of etchant according to conventional methods.

***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL H. CALEY whose telephone number is (571)272-2286. The examiner can normally be reached on M-F 8:30 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David C. Nelms can be reached on (571) 272-1787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael H. Caley/  
Primary Examiner, Art Unit 2871